

REMARKS

This Amendment is in response to the Advisory Action mailed on October 1, 2007 and the Telephone Interview conducted with the Examiner, Mr. Arthur L. Corbin on October 5, 2007. During the Telephone Interview, Mr. Corbin stated that submission of a Second Amendment After Final would be entered after the final rejection if the amendment to the claims did not raise new issues that would require further consideration and/or search. Therefore, claims 3, 8, 10 and 28 have been amended to rectify minor typographical errors. In addition, the paragraph starting at page 2, line 27 has been amended to disclose the status of Application No. 09/495,960. Claims 1-11, 14 and 21-28 remain in this application. Claims 23-26 have been withdrawn as the result of an earlier restriction requirement and Applicant retains the right to present claims 23-26 in a divisional application. No claims have been added and no claims have been canceled.

In addition, this Amendment includes Exhibits A-E to support the arguments presented in this Amendment as further explained below.

Claim Rejections Under 35 U.S.C. §112, First Paragraph

In the Office Action, the Examiner rejected claims 10 and 28 as allegedly failing to comply with the written description requirement. As noted, claims 10 and 28 have been amended. It is believed the amendment to claims 10 and 28 places claims 10 and 28 in allowable form. Therefore, reconsideration and allowance of claims 10 and 28 is respectfully requested.

Claim Rejections under 103(a)

The Office Action rejected claims 1-11, 14, 21, 22, 27 and 28 as allegedly being unpatentable over U.S. Patent No. 3,640,723 issued to Uhlig et al, hereinafter referred to as the "Uhlig patent". According to the Office Action, the Uhlig patent treats soybean meal rather than whole soybeans and there is no patentable distinction between the size of the starting materials and the Office Action refers to Page 19 of the above-identified application as support. Nevertheless, the Uhlig patent still does not teach or disclose the present invention as defined in pending claims 1-11, 14, 21, 22, 27 and 28. This is because the soybean meal of the Uhlig patent is a processed soybean product and not a raw whole vegetable composition as presented in pending claims 1-11, 14, 21, 22, 27 and 28. In general, soybeans are cracked to remove the hulls (seed coat) and then rolled into full-fat flakes. After rolling, oil is extracted the defatted soy

flakes are further processed into soybean meal for animal feeding (see Exhibit A of the Amendment). Therefore, the processed soya meal of the Uhlig patent is not the raw vegetable compositions as defined in pending independent claims 1, 7, 9, 14 and 21. Furthermore, Exhibit A is included in this Amendment as Exhibit A is necessary to demonstrate that soya meal is not raw whole soybeans. In addition, Exhibit A was not presented earlier since evidentiary support to distinguish processed soya meal from raw soybeans was not believed to be required. Since the Uhlig patent teaches enzymatic treatment of processed soya meal, the Uhlig patent does not teach the present invention as defined in independent claims 1, 7, 9, 14 and 21. Independent claims 1, 7, 9, 14 and 21 are believed allowable in the present form. Since independent claims 1, 7, 9, 14 and 21 are believed allowable in their present form, dependent claims 2-6, 8, 10-11, 22 and 27 are also believed allowable. Therefore, Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 1-11, 14, 21, 22, 27 and 28 under U.S.C. §103(a) and that claims 1-11, 14, 21, 22, 27 and 28 be allowed.

The Office further rejected claims 1-8, 27 and 28 under 35 U.S.C. 103(a) as allegedly being unpatentable over U.S. Patent No. 3,705,810 issued to Lendvay, hereinafter referred to as the "Lendvay patent". According to the Office Action, the Lendvay teaches the addition of cellulase, hemicellulase and/or pectinase to green coffee beans by soaking the green coffee beans in water containing said enzymes. Only claims 1, 7, 14 and 21 will be discussed because if the independent claims are non-obvious then the dependent claims are also non-obvious. See, *In re Fine*, 5 U.S.P.Q.2d at 1600. Before responding to the rejections, a brief summary of the present invention will be provided. The above-referenced application generally teaches the application of aqueous enzymatic compositions to degrade raw whole vegetable compositions. Raw whole vegetable compositions, such as legumes, nuts, and the like often include high levels of polyphenolic compounds. As disclosed in U.S. Patent No. 5,888,562 issued to Hansen et al that was cited by the Examiner during prosecution of Serial Application No. 09/495,960, now abandoned, at column 2, lines 65 to column 3, lines 4 (see Exhibit B of the Amendment), technical enzymes are sensitive to polyphenols and too high a polyphenolic content significantly inhibits enzyme activity and thus prevent their use. Therefore, if raw whole vegetable compositions are substantially modified or processed prior to enzymatic degradation, enzyme

deactivation would occur when the polyphenols are released into the aqueous enzymatic composition.

As discussed in the Amendment of December 5th, 2006, green coffee beans are processed beans that have been sun dried, milled, fermented and pulped. Processing coffee beans by these techniques has the effect of modifying or substantially altering the seed coat of green coffee beans. As a result, the polyphenols that are present in green coffee beans (see Exhibit C of the Amendment) would inhibit enzyme activity and not allow enzymatic modification as the polyphenols would leach out of the processed green coffee beans and into the aqueous enzymatic composition. Therefore, the Lendvay patent does not teach the present invention as defined in pending claims 1-8, 27 and 28 since the Lendvay patent teaches enzymatic modification of processed green coffee beans.

Exhibit B is included in this Amendment as Exhibit B is necessary to describe the effects of polyphenols on enzyme activity. Exhibit B was not provided earlier as the patent was cited and reviewed by the Examiner during prosecution of Application No. 09/495,960, and the above-identified application is a continuation-in-part of 09/495,960 which was incorporated in its entirety into the above-identified application and to which the present application claims priority. In addition, the Examiner indicated in the Office Action mailed June 19, 2002 that there is allowable subject matter when the invention is directed to green unfermented cocoa beans (Please refer to page 4 of the Office Action mailed on June 19, 2002). Therefore, the effect of polyphenols on technical enzymes was known by the Examiner. Exhibit C is included in this Amendment as Exhibit C is necessary to demonstrate that green coffee beans contain polyphenols and was not provided earlier as it was believed that the arguments presented in the Amendment of December 6, 2006 with respect to the degree of processing of green coffee beans prior to enzymatic modification was sufficient to demonstrate that processed green coffee beans are not raw whole vegetable compositions as defined in pending claims 1-8, 27 and 28.

Independent claims 1, 7, 14 and 21 are believed allowable in their present form. Because claims 2-6 depend from independent claim 1 which is non-obvious, claims 2-6 are also non-obvious. Since claim 8 depends from independent claim 14 which is non-obvious, claim 8 is also non-obvious. Since claims 27 and 28 depend from independent claim 21 which is non-obvious, claims 27 and 28 are also non-obvious. Therefore, Applicant respectfully requests

reconsideration and withdrawal of the rejection of claims 1-8, 27 and 28 under U.S.C. §103(a) and that claims 1-8, 27 and 28 be allowed.

The Office Action also rejected claims 1-11, 14, 21, 22, 27 and 28 as allegedly being unpatentable over U.S. Patent No. 3,845,220 issued to Suzuki, hereinafter referred to as the "Suzuki patent". The Suzuki patent teaches enzymatic modification of coffee liquor derived from parched coffee beans. Parched coffee beans are beans that have been subjected to a long slow boiling step (see Exhibit D of the Amendment) in order to render the beans not fertile (see Exhibit E of the Amendment). Therefore, the parched coffee beans of the Suzuki patent have been substantially processed by long slow boiling. Hence, the Suzuki patent teaches enzymatic modification of coffee liquor obtained from soaking long slowly boiled coffee beans. As discussed in the Amendment of December 5, 2006, the term "raw" refers to vegetable compositions that have not been boiled, cooked or the like. Therefore, for the reasons presented above along with those presented in the Amendment of December 5, 2006, the Suzuki patent does not teach or render obvious the invention as defined in pending claims 1-11, 14, 21, 22, 27 and 28.

Furthermore, Exhibits D and E are included as part of this Amendment as Exhibits D and E were recently discovered after an extensive internet search to describe the term "parched" as it relates to coffee beans. The term "parched" as it relates to coffee beans is not defined in conventional dictionaries and was not a term of art included in certain electronic dictionaries specific for coffee beans. As noted in Exhibit D, the term "parching" is defunct and was once used to describe long slow boiling. Hence, evidence to support the description of "parched" has not been easy to obtain. In addition, Exhibits D and E are believed necessary to distinguish the raw whole vegetable compositions of the present invention from the parched coffee beans of the Suzuki patent.

Independent claims 1, 7, 14, and 21 are believed allowable. Because claims 2-6 depend from independent claim 1 which is non-obvious, claims 2-6 are also non-obvious. Since claim 8 depends from independent claim 7 which is non-obvious, claims 8 and 11 is also non-obvious. Since claims 27 and 28 depend from independent claim 21 which is non-obvious, claims 27 and 28 are also non-obvious. Therefore, Applicant respectfully requests reconsideration and

withdrawal of the rejection of claims 1-9, 11 and 14 under U.S.C. §103(a) and that claims 1-9, 11 and 14 be allowed.

It is believed claims 1-11, 14 and 21-28 are in allowable form. Consequently, reconsideration and allowance of claims 1-11 and 14 and 21-22, 27-28 is respectfully requested.

Respectfully submitted,

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